



A.D. 1862, 14th MARCH. N^o 703.

S P E C I F I C A T I O N

OF

GEORGE HENRY BIRKBECK.

RUSSES OR BANDAGES, AND PESSARIES
TO BE USED THEREWITH.

L O N D O N :

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,

PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY :

PUBLISHED AT THE GREAT SEAL PATENT OFFICE,

25, SOUTHAMPTON BUILDINGS, HOLBORN.

1862.



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Trusses or Bandages, and Pessaries to be used therewith.

LETTERS PATENT to George Henry Birkbeck, of the Firm of Tongue and Birkbeck, of 34, Southampton Buildings, Chancery Lane, in the County of Middlesex, Patent Agents and Engineers, for the Invention of "IMPROVEMENTS IN TRUSSES OR BANDAGES, AND IN PESSARIES TO BE USED THEREWITH WHEN REQUIRED."—A communication from abroad by M. Louis Polydore Grandcollot, of Paris, in the Empire of France.

Sealed the 12th September 1862, and dated the 14th March 1862.

PROVISIONAL SPECIFICATION left by the said George Henry Birkbeck at the Office of the Commissioners of Patents, with his Petition, on the 14th March 1862.

I, GEORGE HENRY BIRKBECK, of the Firm of Tongue and Birkbeck, of 34, Southampton Buildings, Chancery Lane, in the County of Middlesex, Patent Agents and Engineers, do hereby declare the nature of the Invention for "IMPROVEMENTS IN TRUSSES OR BANDAGES, AND IN PESSARIES TO BE USED THEREWITH WHEN REQUIRED," to be as follows:—

This Invention relates to the arrangement and combination of a jointed and moveable pessary, a replacing and graduated relieving apparatus or instrument for keeping the uterus in its place, and intended for the cure of prolapsus uteri, and to remedy the displacement of that organ. This instrument is connected to or combined with a double-jointed hypogastric bandage, with a posterior pad or cushion, by a curved supporting arm of swan-

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neck form, which fits the the convexity of the pubis, and which can be moved as required to the right or left in order to adapt itself in the most convenient manner possible to the intravaginal rod, which carries the bowl or hollow elastic instrument for supporting the deranged organ. The mode of jointing the intravaginal rod with the curved arm or swan-neck connection allows the 5 rod to move freely round its vertical axis, so as to perform the lateral, anterior, posterior, and all the motions intermediate to them, and, lastly, to describe a circuitous movement. Two pads or cushions are jointed to the hypogastric truss, which are capable of being readily fixed and adjusted in any desired position. These pads or cushions are intended to sustain the weight of the 10 abdomen, or to exercise a pressure on the region of the anus, or upon any one or more of such points. The truss or bandage is composed of a cushion, which takes its point of support on the lumbar region, at which point two springs are attached; the anterior extremity of which is furnished with two pads or cushions capable of yielding and being placed in inclined or other 15 suitable positions. The inclination of these pads or cushions is first adjusted, and then fixed in the required position by a screw, which produces the pressure on a ball and socket joint at the back of each pad or cushion, on which they are capable of rotation. The distance or position of the pads or cushions from each other can also be varied. The parts are connected 20 together by a double-hinged joint, and fastened by a spring bolt or by other convenient means. To the central part of this jointed piece a vertical plate is fixed by a screw, so as to be capable of adjustment to vary the position of the parts connected thereto. To the lower ends of this vertical plate the curved arm which supports the pessary is attached by suitable joints, so that 25 the height and angle of inclination of the pessary can be arranged and controlled as required. The lower end of the curved arm is formed with a spherical joint, which supports the intravaginal rod, consisting of a tube marked with divisions, which indicate the respective heights to which the hollow bowl or pessary can be raised. Around this there is another tube 30 formed into a fork at the upper end, to which the hollow bowl or pessary is jointed. In the interior of the tube there is a screw rod, which screws into a socket, the upper part of which is forked, and is also jointed to the hollow bowl or pessary, and by giving motion to this screw by means of a screw nut at the lower end, the inclined position of the hollow bowl or pessary may be 35 varied. An internal helical spring is inserted in the tube to impart the vertical elasticity necessary to the intravaginal rod to accommodate itself to any movement or change of position of the parts. To the back of the hollow bowl or pessary a kind of prolongation may be applied in the form in the back

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of an arm chair, which serves, in cases of weakness, to raise up and correct the position of the body of the "uterus." The hollow bowl or pessary may be made of elastic or other suitable material, and so constructed that the lower part may be sufficiently hard to be attached to the mechanism, whilst the
5 upper surface, which comes in contact with the organs, may have all the flexibility and softness desired.

The principal features of this Invention consist, first, in the arrangement of the truss or bandage formed with joints and pads or cushions, which may be placed in any desired position. This arrangement of parts may be applied to
10 all instruments or bandages of this character to which they can be adapted.

Secondly, the arrangement and combined action of the pessary, carried by the curved arm, together with the adjusting plate, the fastenings of which, fitted to the truss or bandage, may remain fixed, or be allowed to move to the right or left as desired.

15 Thirdly, the peculiar arrangements which admit of the pessary or supporting instrument to be introduced directly or laterally, and so as afterwards to be placed horizontally, or at any convenient angle between the vertical and the horizontal positions after its introduction.

Fourthly, the mode of jointing the intravaginal rod with the curved arm,
20 so as to allow the rod to move freely round its vertical axis to perform any desired movement.

Lastly, the apparatus may be varied in size, form, and material, and the curved arm and intravaginal rod may be made of gold, silver, or other suitable inoxydisable metal or material. The pessary or supporting bowl or
25 instrument may also be made of the same materials, or of ivory, caoutchouc, gutta percha, or other suitable substance.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said George Henry Birkbeck in the Great Seal Patent Office on the 13th September 1862.

30 **TO ALL TO WHOM THESE PRESENTS SHALL COME, I, GEORGE HENRY BIRKBECK**, of the Firm of Tongue and Birkbeck, of 34, Southampton Buildings, Chancery Lane, in the County of Middlesex, Patent Agents & Engineers, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters
35 Patent, bearing date the Fourteenth day of March, in the year of our Lord One thousand eight hundred and sixty-two, in the twenty-fifth year of

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Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said George Henry Birkbeck, Her special license that I, the said George Henry Birkbeck, my executors, administrators, and assigns, or such others as I, the said George Henry Birkbeck, my executors, administrators, and assigns, should at any time agree with, and no others, from time to 5 time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "IMPROVEMENTS IN TRUSSES OR BANDAGES, AND IN PESSARIES TO BE USED THEREWITH WHEN REQUIRED," a communication to me from abroad by 10 M. Louis Polydore Grandcollot, of Paris, in the Empire of France, upon the condition (amongst others) that I, the said George Henry Birkbeck, my executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be 15 performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said George Henry Birkbeck, do hereby declare the nature of the said Invention, and in what manner the same 20 is to be performed, to be particularly described and ascertained in and by the following statement thereof, that is to say:—

This Invention relates to the arrangement and combination of a jointed and moveable pessary, a replacing and graduated relieving apparatus or instrument for keeping the uterus in its place, and intended for the cure of prolapsus 25 utery, and to remedy the displacement of that organ. This instrument is connected to or combined with a double-jointed hypogastric bandage with a posterior pad or cushion by a curved supporting arm of swan-neck form, which fits the convexity of the pubis, and which can be moved as required to the right or left, in order to adapt itself in the most convenient manner possible to the 30 intravaginal rod, which carries the bowl or hollow elastic instrument for supporting the deranged organ. The mode of jointing the intravaginal rod with the curved arm or swan-neck connection allows the rod to move freely round its vertical axis, so as to perform the lateral, anterior, posterior, and all the motions intermediate to them, and, lastly, to describe a circuitous movement. 35 Two pads or cushions are jointed to the hypogastric truss, which are capable of being readily fixed and adjusted in any desired position; these pads or cushions are intended to sustain the weight of the abdomen or to exercise a pressure on the region of the anus, or upon any one or more of such points.

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And in order that the Invention may be most fully understood and readily carried into practice, I will proceed to describe the Drawing hereunto annexed.

DESCRIPTION OF THE DRAWING.

- 5 Figure 1 shews a front view of a truss or bandage arranged and constructed according to this Invention; Figure 2 shews a plan of the same partly in section; and Figure 3 shews a transverse section of the same; Figure 4 is a vertical section on a larger scale, shewing the combined action of the intra-vaginal rod. The other Figures shew some of the parts separately.
- 10 The truss or bandage is composed of a cushion A, which takes its point of support on the lumbar region, at which point two springs M and N are attached, the anterior extremity of which is furnished with two pads or cushions B, B¹, capable of yielding and being placed in inclined or other suitable positions. The inclination of these pads or cushions is first adjusted
- 15 and then fixed in the required position by a screw C, which produces the pressure on a ball and socket joint D at the back of each pad or cushion, on which they are capable of rotation. The distance or position of the pads or cushions from each other can also be varied by varying the points of oscillation between the slots of the parts E¹ fixed to the springs M and N. The parts F¹
- 20 are connected together by a double-hinged joint F, and the truss is closed or fastened by a spring bolt V, or by other convenient means. To the central part of this jointed piece a vertical plate H is fixed by a screw, so as to be capable of adjustment to vary the position of the parts connected thereto; G is a circular disc connected to the part F, as shewn, which serves to receive the
- 25 plate H, so as to fix it firmly in position. The disc G is capable of moving in on one side or the other, in order to incline the parts carried by the plate H, as required. The parts are secured in position by the screw I. A number of holes are drilled in the face of the plate H for the point of the screw G to enter in order to adjust the height to which the pessary is required to be raised. To
- 30 the lower ends of this vertical plate H the curved arm O which supports the pessary is attached by suitable joints, so that the height and angle of inclination of the pessary can be arranged and controlled as required. To the lower end of the plate H the piece K is jointed, which is also capable of adjustment by means of the screw L. In this manner the arrangement of the pessary may
- 35 be inclined more or less in any direction in relation to the plate H when required. The upper end of the curved arm O enters into a socket in the piece K, and is fixed in any desired position by the screw P, the end of which enters a groove formed around the end of the arm O. The lower part of the

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curved arm O is formed with a spherical joint r , which supports the intra-vaginal rod R, consisting of a tube r^1 (formed (with a spherical end r), marked with divisions, which indicate the respective heights to which the hollow bowl or pessary X can be raised. Around this there is another tube s , formed into a fork s^1 at the upper end, to which the hollow bowl or pessary X is jointed. 5 In the interior of the tube there is a screw rod c , which screws in a socket, the upper part of which is forked, and is also jointed to the hollow bowl or pessary X, and by giving motion to this screw by means of a screw nut e at the lower end, the inclined position of the hollow bowl or pessary may be varied. An internal helical spring is inserted in the tube to impart the vertical elasticity 10 necessary to the intravaginal rod to accommodate itself to any movement or change of position of the parts. The position of the tube s surrounding the tube r^1 is not changed in relation thereto by reason of the projection a soldered to the part u entering a groove a^1 , as shewn at Figure 4. The screw u is combined with the tube s , and with the part i , which is retained in the 15 groove x^1 of the tube z , in order that the two parts may move simultaneously. The lower part of the tube x is grooved to receive the button k , cut with teeth to act as a catch for the sliding bolt l to lock the parts when in position. The piece v acts as a guide to the screw rod c , the pitch of which is the same as that of the screwed piece v , and which rod c works in the tube d , to which are 20 jointed the forked arms d^1 attached to the oval bowl X. The tube d fits into the tube v , as seen at Figure 4. A grooved collar c^1 , formed at the lower part of the rod c , is arranged to receive the ends of the two pins n , which allow of free rotatory movement, but which at the same time prevent any alteration of the vertical position. The power of working the rod c is furnished by means 25 of the button e fixed on the end of the rod f , which is connected to the rod c by means of projections c^2 . The slotted rod h allows the rod c as well as the piece to which it is fixed to rise or descend as required, and as is hereafter explained. The spiral spring i , placed between the piece v and the part x , serves to give the vertical elasticity necessary to the intravaginal rod in order 30 that it may accommodate itself to the movements of the body. The spring i always remains in the same degree of tension whatever be the height to which the bowl or instrument X has been raised by the tube s and parts connected therewith.

From the previous description it will be seen that by the combination of the 35 several parts, all the variations necessary for the various functions of the pessary may be obtained. The power of inclining the bowl or instrument X to any angle required is obtained by turning the milled button e , which is fixed on the rod f and tied by the pins c^1 to the screw rod c . This rod c causes the tube d

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with the arms d^1 attached to the bowl or instrument X to ascend or descend and thus vary the inclination thereof, as shewn by the red lines in Figure 3.

The ascent of the bowl or instrument X, and of the intravaginal rod is caused by first drawing back the bolt l from the notched button k , then turning
5 this button with the button e . The movement of the screw c and of the piece i being the same, it follows that the tube s , as well as that marked d , will rise equally together by keeping the distance of the piece equal in relation to the tube v , and by preserving the same tension to the spring i . If it be desired to change the angle of the bowl or instrument X in relation to the horizontal
10 plane, pressure must be applied to the spring bolt y , which disengages it from any one of the notches in the sphere r , which allows the operator to change the position of the rod R and parts connected therewith, as shewn by red lines in Figure 2.

To the back of the hollow bowl or pessary X, a kind of prolongation may
15 be applied in the form of the back of an arm chair, which serves in cases of weakness to raise up and correct or adjust the position of the body of the uterus. The supporter is rounded and suitably joined to form a continuation with the rim of the bowl X. The upper part is also slightly inflated in order to produce a surface that will not injure the patient. The hollow bowl or
20 pessary may be made of elastic or other suitable material, and so constructed that the lower part may be sufficiently hard to be attached to the mechanism, whilst the upper surface which comes in contact with the organs may have all the flexibility and softness desired.

The principal features claimed under this Invention consist, first, in the
25 arrangement of the truss or bandage formed with joints and pads or cushions, which may be placed in any desired position. This arrangement of parts may be applied to all instruments or bandages of this character to which they can be adapted.

Secondly, the arrangement and combined action of the pessary X, carried
30 by the curved arm O and other parts together with the adjusting plate, the fastenings of which fitted to the truss or bandage may remain fixed or be allowed to move to the right or left as desired.

Thirdly, the peculiar arrangements which admit of the pessary or supporting instrument being introduced directly or laterally, and so as afterwards to be
35 placed horizontally or at any convenient angle between the vertical and the horizontal positions after its introduction.

Fourthly, the mode of jointing the intravaginal rod with the curved arm so as to allow the rod to move freely round its vertical axis to perform any desired movements.

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Lastly, the apparatus may be varied in size, form, and material, and the curved arm and intravaginal rod may be made of gold, silver, or other suitable inoxydisable metal or material, the pessary or supporting bowl or instrument may also be made of the same materials, or of ivory, caoutchouc, gutta percha, or other suitable substance.

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In witness whereof, I, the said George Henry Birkbeck, have hereunto set my hand and seal, this Thirteenth day of September, in the year of our Lord One thousand eight hundred and sixty-two.

GEORGE HENRY BIRKBECK. (L.S.)

LONDON:

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1862.



